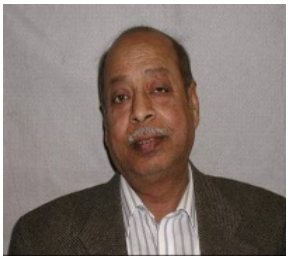
SHORT COURSE T10
FCCU HOT GAS EXPANDER DESIGN, OPERATION and TROUBLESHOOTING



Dr. Murari Singh (Bethlehem, Pennsylvania) is the President of Safe Technical Solutions, Inc (SAFETSOL). Dr. Singh has been involved in the design, development and analysis of industrial turbomachinery for forty years with Turbodyne Corporation, Dresser Industries, Dresser-Rand Company, GE CONMEC and most recently with GE Oil & Gas as Consulting Engineer. Dr. Singh has extensive knowledge and experience with fatigue and fracture mechanics, stress and vibration of structures, reliability, life analysis, probabilistic analysis. Dr. Singh has been involved in (developing and teaching) application of lifing strategy to many mechanical components. This includes subjects dealing with hcf, lcf, creep, fracture mechanics. Probabilistic method is used to estimate risk in design.

David Linden is President of D.H. Linden Associates, Inc. Mr. Linden has 38 years of experience in the Turbomachinery industry and is a renowned expert in the area of hot gas expanders including their design, application, repair and operation. Mr. Linden has worked at a number of Original Equipment Manufacturer's including Conmex Inc., Dresser Rand Co., General Electric Co., Ingersoll Rand Co. and Westinghouse Electric Corp. He is an author/coauthor of twelve technical papers for various technical forums including the ASME and Turbomchinery Symposiums. He graduated with a BSME from Rutgers University and is a member of ASME, ASTM, NACE and a contributor to the API 687 Rotor Repair sub-committee.

Michael J. Drosjack, Ph.D. retired in December 2009 from Shell Oil Company after 34+ years. He is currently a private consultant in rotating machinery. Throughout his career he was a member of the Rotating Equipment Department in the Central Engineering function in Houston, Texas. He provided technical support for rotating and reciprocating machinery to Shell and Shell-affiliated companies worldwide, as well as to commercial customers. After joining Shell in 1975, he worked on projects involving specification, evaluation, installation, and startup of machinery along with extensive field troubleshooting, particularly in the area of vibration measurement, vibration analysis, and rotordynamics. Dr. Drosjack earned his B.S. (Mechanical Engineering, 1970) from Carnegie-Mellon University, and his M.S. (1971) and Ph.D. (1974) degrees (Mechanical Engineering) from The Ohio State University. He is a member of ASME, the Vibration Institute, the Machinery Subcommittee of the Ethylene Products Committee, participates in API task forces, and has been a speaker and panelist for NPRA. He has been a Turbomachinery Symposium Advisory Committee member since 1986.